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Global Vegetation
Atmospheric Chemistry
Field Experiments
Interdisciplinary Earth Science
Educational Outreach
Overall DAAC News

LOOK FOR US AT CONFERENCES

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AVHRR LAND IMAGE

See picture inside.

JOIN OUR READERS

To receive future issues of Data Streams, contact our Help Desk.

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NASA Goddard Space Flight Center
Distributed Active Archive Center

Data Streams

A Periodic Newsletter from the Goddard DAAC

Volume 1, Number 2 • August 1996

More Pathfinder Data Available

The Advanced Very High Resolution Radiometer (AVHRR) Land Pathfinder processing system has completed processing for data years 1981 to 1994. By March 31, 1996, the Goddard DAAC met a scheduled commitment to the NASA Pathfinder Program Manager for the generation and distribution of a long-time series, 8-km resolution, land vegetation data set to the science community.

Almost 14 years of AVHRR NOAA global area coverage data have been processed with a consistent algorithm to produce quality parameters and ancillary information.

Although the algorithm was not completely error free, the DAAC has avoided making any changes to the processing algorithm that might introduce discontinuities into the data set. This would preclude the anticipated use of the data set as a long-time series data set and render it unsuitable for global change research studies. Instead, the DAAC has generated the data set in toto with an invariant algorithm and plans to rectify previous errors by postprocessing correction steps.

Two major problems have been identified with the processing algorithm. First, adjustments to the channel one and two radiances to remove atmospheric perturbations due to Rayleigh scattering and ozone absorption were not performed correctly. Postprocessing software to remove these errors has been made available to users. Second, a problem has been found in the Pathfinder software code that computes solar zenith angles. This error is seasonally dependent and grows in magnitude with the distance in time from the reference year 2000. A strategy for applying a correction to the full data set has been worked out. However, the amount of postprocessing that can be performed will be controlled by funding availability.

FUTURE PLANS

In addition to completing processing for the scheduled data years, the DAAC would also like to process data year 1995 and catch up to near real time for data year 1996. This is dependent on availability of funding. Plans have been made for reissuing a series of Science CD-ROMs spanning the full data set time period for a subset of the vegetation parameters for the 10-day composite global product. This

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task is currently on hold pending a satisfactory resolution of the solar zenith angle problem.

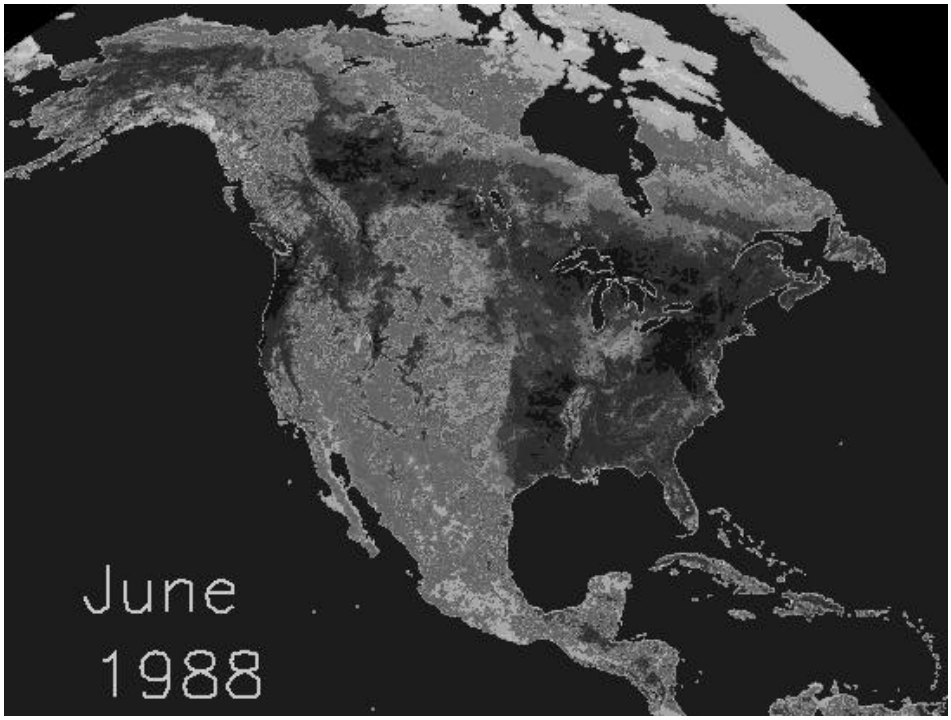
Plans exist to enhance the DAAC distribution system by providing users with the capability of selecting their own geographic subsets and possibly of requesting alternative map projections.

MEETINGS & USER SUPPORT

AVHRR data set team personnel attended the spring meeting of the American Society for Photogrammetry and Remote Sensing (ASPRS) and displayed a sample of AVHRR Land Image products at the Earth Observing System Data and Information System (EOSDIS) booth.

AVHRR 10-day composite image data for North America, 1988, were provided to the U.S. Environmental Protection Agency for inclusion in their video product, "Comparing Model Predictions to Satellite Data."

AVHRR Land Image Product



Conference & Meeting Reports

Association of American Geographers Annual Meeting

In April, members of the DAAC staff attended the Association of American Geographers (AAG) annual meeting, held this year in Charlotte, NC. While attending the conference, DAAC staff manned the EOSDIS booth and attended presentations. The EOSDIS booth was well received by conference attendees.

American Geophysical Union Annual Meeting

The Goddard DAAC Interdisciplinary Team presented a poster at the annual meeting of the American Geophysical Union (AGU), held in Baltimore, MD, the week of May 20. The poster presented an overview of the Goddard DAAC Interdisciplinary Team data collection. This data set is available by FTP, and was developed to facilitate the use of integrated, multiyear data sets related to the U.S. Global Change Program

International Geoscience and Remote Sensing Symposium (IGARSS)

Carla Evans, DAAC Education Outreach investigator, attended the Mission to Planet Earth education sessions at the May 28–30 IGARSS, which was held in Lincoln, Nebraska. The sessions consisted of presentations and group discussions of Earth Science educational projects from around the world.

Following the conference, two of the international presenters came to Washington, D.C., to meet and discuss the development of Earth science educational products with NASA programs. Carla hosted the visitors from the National Space Development Agency of Japan, Akiko Goto and Yuko Nagata, at the Goddard DAAC where she demonstrated several of the ongoing educational products in development.

Satellites and Education Conference IX and the Space Grant National Conference

DAAC staff attended these conferences in West Chester, PA, and Williamsburg, VA, respectively, to build relationships with the educational community and the National Space Grant institutions. The objective was to gain a better understanding of the needs, capabilities, and uses of remote sensing data at the K–16 level. The information gained

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OMTPE Approves the Goddard DAAC's Earth Science Educational Series

NASA Headquarters has approved the Goddard DAAC's unsolicited educational proposal "NASA Goddard DAAC, Earth Science Educational Series." In the letter informing Dr. Blanche Meeson of the NASA approval of the series, Lisa Ostendorf, Education Program Manager of the Office of Mission to Planet Earth (OMTPE), wrote that the DAAC's educational series was "an exciting addition to the implementation of a strategically focused MTPE education program."

The duration of the proposal is for 3 years contingent upon NASA procurement regulations and the availability of funds. Funding has been received for the first year of development. The principal investigator is Dr. Blanche Meeson; the coinvestigator is Carla Evans.

Addressing students and instructors of the precollege and undergraduate levels, the series will focus on global environmental changes of Earth's atmosphere and biosphere and global climate phenomena. Each of the series will contain scientific information with diagrams, data, and freeware image processing software to display and analyze the data. A tutorial on how to use the software will be provided showing example applications.

Clockwise from top:
Cyndi, Sean, and Linda

The Goddard DAAC will develop the series of products in conjunction with teachers and experts in science education and with Earth scientists. Although the proposed products are designed for ready use by educators and students without additional training, the DAAC will work with educators to develop workshops and to conduct demonstrations at conferences. Product distribution is free on CD-ROM for the Macintosh and PC and on the DAAC World Wide Web site.

The first in the series will be on the topic of ozone. The DAAC has formed a partnership with the NASA GSFC scientists in the Atmospheric Chemistry and Dynamics Branch (Code 916) and the Earth System Science Education (ESSE) program to produce a set of eleven 1-hour lectures to provide the necessary background information to understand atmospheric studies of global total ozone. In addition, a test version of the tutorial for using NIH imaging software is presently being tested by our educational partners. A test version of the first series is expected to be available for review and testing on the DAAC WWW site in January 1997.

This summer the project has two teacher interns (Linda Webb, with the GSFC teacher intern program, and Sean McLaughlin, with the Maryland Space Grant Consortium) and a NASA Space Academy intern (Cyndi Hall) reviewing and testing the tutorial. The next step is to have additional educators formally evaluate the tutorial to ensure that it can be integrated into a classroom.

The proposed educational effort fulfills NASA's plan "to promote excellence in America's education system through enhancing and expanding scientific and technological competence." In contributing to the achievement of the NASA, MTPE, and Goddard educational goals, the DAAC intends to produce educational materials that will be in demand by Earth science educators who teach global environmental issues.

VOLUNTEERS NEEDED

The Goddard DAAC needs volunteers in dozens of activities as part of NASA's Mission to Planet Earth effort. We need you for a wide range of opportunities, including outreach user support, distributing science and educational data, and developing new and innovative ways to understand Global Change. You can sign up for as little as 8 hours a month and work on flexible schedules with exciting people at Goddard's newest campus in Building 32. Call our Outreach Specialist at 301–614–5149 for more information and a volunteer application.

The Goddard DAAC distributes images and information about life in the sea, the location of vegetation across the globe, and information about the "ozone hole" over the Antarctic region plus other topics. Researchers and educators use this information in important work investigating global climate change.

Conference & Meeting Reports

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from these and other conferences is being incorporated into the DAAC educational products under development.

Second International GEWEX Conference

DAAC staff presented a poster at this Washington, DC, conference entitled Use of ISLSCP Initiative I CD-ROM Data Collection in Global Land-Atmosphere Modeling. Participants to the conference received a set of the CDs at registration—many participants were already familiar with the data collection and have been actively using it. Staff also participated in conversations with members of the hydrological sciences community.

UPCOMING CONFERENCES

XVIII Quadrennial Ozone Symposium '96

This premier meeting of ozone scientists will be held September 12–21, 1996, at the University of L'Aquila, Italy (about 50 miles from Rome). This symposium is sponsored by the International Ozone Commission (IO3C) of the International Association for Meteorology and Atmospheric Sciences (IAMAS). It will cover both tropospheric and stratospheric aspects of the ozone science. Some DAAC staff members probably will attend this symposium.

Ocean Optics XIII

Ocean color scientists will be meeting October 22–25, 1996, in Halifax, Canada, for Ocean Optics XIII. The Goddard DAAC representative at this meeting will be Becky Farr who will have various DAAC-generated materials available for distribution.

AGU Fall Meeting

The fall meeting of the American Geophysical Union will be held December 12–15, 1996, at the Monscone Center in San Francisco.

BAD JOKE CONTEST WINNER

How many climatologists does it take to change a light bulb?

Three. One to write the study proposal, one to gather the data and run the Neon Depletion model, and one to choose the contractor who will prepare the documentation and call Maintenance.

See your own bad joke in this spot.
Submit your contest entries to the Editors today.

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